A GUIDE TO HARDWARE MODIFICATIONS FOR KAYPRO MICROCOMPUTERS

KAYPRO HARDWARE DIRECTORY

Promotions Department

Kaypro Corporation

Part Number 3196-A

THIRD-PARTY VENDOR LIST

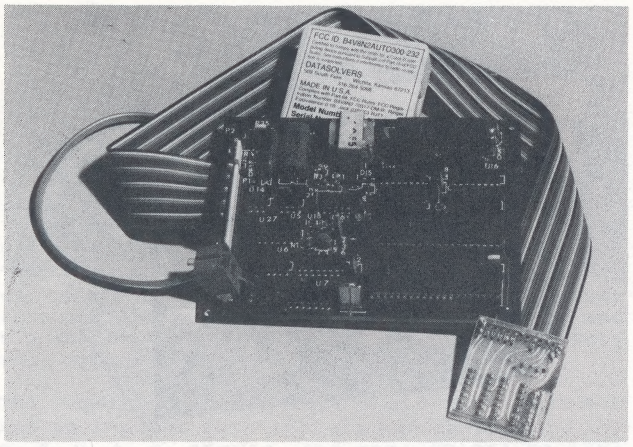
Please send all comments and suggestions to the address below:

Third-party Vendor List
Promotions Department
Kaypro Corporation
533 Stevens Avenue
Solana Beach, CA 92Ø75

Manufacturers are encouraged to submit product literature with black and white photographs for review. Kaypro welcomes submissions for consideration for inclusion in future revisions.

DISCLAIMER

This list of manufacturers of Kaypro accessories is provided to Kaypro customers and dealers for informational purposes only. These companies have no connection with Kaypro Corporation. Kaypro Corporation does not in any way support or endorse these products or their use. Any damage to your Kaypro computer or other equipment is not covered under our warranty, and any alteration to your Kaypro voids the warranty.



DS300AD and DS1200SMT Modems

USES:
Datasolver's modems are auto-dial/auto-answer internally-mounted add-on cards that are designed specifically for KAYPRO 2, KAYPRO 4, and KAYPRO 10 computers. They can automatically dial other computers using keyboard input. Both the DS 300AD and DS 1200SMT come with all the cabling necessary to get started.

They accept the widely-used HAYES command structure which makes it very compatible with other terminals and computers. These modems are Bell 103 and Bell 212A compatible, respectively, and have automatic loss-of-carrier disconnect, meaning that they hang up when no computer is detected at the other end.

INSTALLATION:
Internal installation is similar to the Legacy modem.

TECHNICAL:
Outputs: Mark (off) -4.5V typical
Space (on) + 4.5V typical
Inputs: Mark (off) +1 to -25V
Space (on) +2 to +25V
Data Format: Serial, binary, asynchronous
Data Rate DS300ad: 0-300 bps
Data Rate DS1200SMT: 0-300/1200 bps async.
Modulation: Frequency shift-keyed (FKS)
Line Interface: FCC Part 68 Direct Connect
Transmit Frequency:

	Originate	Answer
Mark	1270 Hz	2225 Hz
Space	1070 Hz	2025 Hz

Transmit Frequency Accuracy: + or - 0.01%
Transmit Level: -12 dBm typical
Receive Sensitivity: -48dBm
Receive Frequency:

	Originate	Answer
Mark	2225Hz	1270 Hz
Space	2025 Hz	1070 Hz

Receive Frequency Tolerance: + or - 0.05%
Carrier Detect Threshold: -44 dBm typical
Carrier Detect Delay: 250ms
Power Requirements: 100 ma
Weight: 285 gm (10 oz)
Operating Temperature: 32 to 122.6F
Environment: 95% RH noncondensing

PRICE: DS300AD (300 bps): $199.00
DS1200SMT (1200 bps): $427.00

AVAILABLE FROM:
Datasolvers
509 S. Fern
Wichita, KS 67213
316 264-5068

Legacy Internal Modem

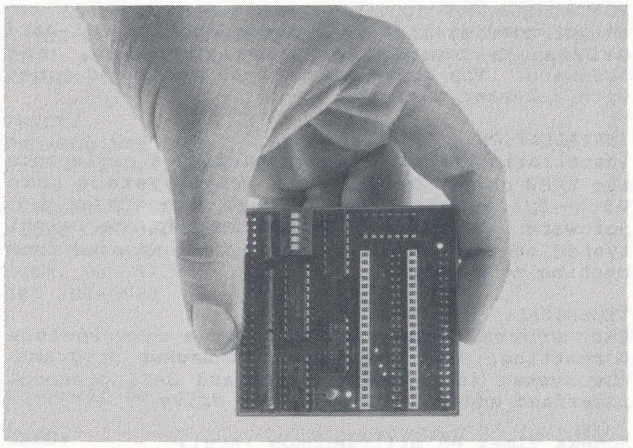
USES:
The Legacy Modem is auto-dial/auto-answer with automatic line detection (0-300/1200 baud). It connects directly to the power supply of the computer and does not need external power. It measures 4" x 5".

INSTALLATION:
The Legacy Modem is installed by removing the main board, mounting the modem under the main board on the floor of the computer, replacing two chips, installing another board to the main board, and running a cable towards the rear of the KAYPRO.

TECHNICAL:
The modem incorporates a modulator, a demodulator, filters, and a TTL-level interface to the KAYPRO. It is HAYES-compatible (Bell 103/212A) and features auto dial/auto redial.

PRICE: KAYPRO 2 and 4: $499.00
KAYPRO 10: $518.00

AVAILABLE FROM:
Legacy Computer Products
26356 Carmel Rancho Ln.
Carmel, CA 93923
408 625-6562



Hard Disk Adaptor

USES:
You will need an adaptor to add on the hard disk. The HDS 1000 is an adaptor that will enable your KAYPRO to connect with hard disk drives using the Western Digital 1000 series disk controllers. The HDS 1000 package includes hardware, software, documentation, and source code. It does not include the hard disk.

INSTALLATION:
The HDS 1000 "piggy backs" between the main board and the Z-80 chip. Installation requires removing the Z-80, plugging in the HDS 1000, replacing the Z-80 on top of the HDS 1000, connecting your own disk controller and hard disk, and installing the HDS software. No soldering is required.

TECHNICAL:
Port address: The HDS 1000 is mapped into the I/O address space and uses any address in the

range XXXX XOOO to XXXX X111 (binary). This is where X is set by the switch register SW1. Shipped as base address of 1000 0000 (binary).

Handshaking: Provides handshaking for the Western Digital WD1000 series.

Software: A format and test utility have been provided as well as a BIOS install prod ram for the Hard Disk. Minor modifications may be necessary to accommodate drives other than the Tandon TM502.

Speed: The HDS 1000 works with a processor clock of 4Mhz or less. Hard disks are approximately seven times faster than standard diskettes.

Host connector: 40 pin dip standoff type
Disc controller: 40 pin header type

PRICE: $95.00

AVAILABLE FROM:
Huntington Data Systems
307 6th Street
Huntington Beach, CA 92648
(714) 960-7498

Hard Disk Drive

USES:
Delphi hard disk drive systems include IMI hard drives, a controller card, cabling, and software. The drive uses plated media and comes with a 2-year warranty.

INSTALLATION:
Installation requires piggy backing a cable onto the Z-80 chip. Delphi hard drive systems come with fully-installed drivers for CP/M 2.2. Software is available for setting up the Delphi system so that it can be easily transported from machine to machine.

TECHNICAL:
Each system comes with utilities that include formatting, disk checking, and backup programs. The system implements a standard SASI protocol interface and is a closed loop drive.

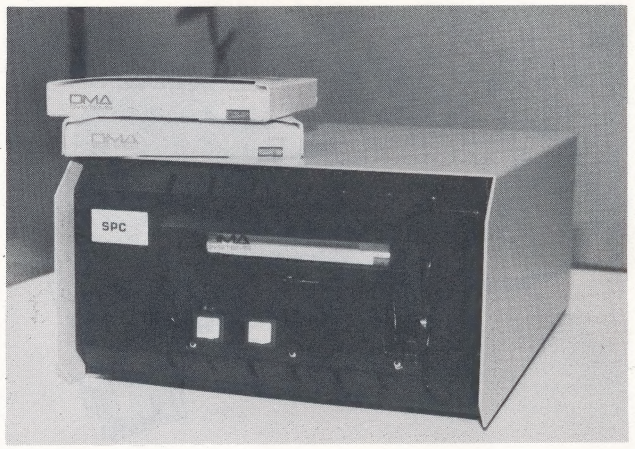
Access Time: 68 milliseconds (avg.)
Capacity:

20 Mb unformatted	16 Mb formatted
40 Mb unformatted	32 Mb formatted

OPTIONS:
In late September 1984, Delphi plans to release a new product. They will be offering an 8" floppy disk and hard disk system with an optional streaming tape backup.

PRICE: Call for price.

AVAILABLE FROM:
The Computer Shoppe
Village Center, Box 617
Great Falls, VA 22066
703 759-6800
800 368-8088



5 RC Removable 5 Mb Cartridge

USES:
In certain situations you may need to store or back up data in such quantities that you might require a removable hard disk cartridge. The Systems Peripherals 5 RC unit is an externally-mounted system that will back up your present hard disk, store 1500 pages of text, and act as a library of information using separate, removable hard disks.

The Diskit
The Diskit expansion chassis holds from 10 to 96 megabytes of plated media on external hard drives and offers the option of adding the 5 megabyte removable cartridge. The Diskit subsystem can also be mounted inside your KAYPRO. The Diskit Combo is configured like a normal Diskit but includes a 5 RC for only $1,195.

INSTALLATION:
The 5 RC Removable 5 Megabyte and the Diskit include a board that "piggy backs" between the Z-80 chip and the main board. A ribbon cable connects the external unit to the computer via this board.

PRICE:

5 RC System	5 Megs:	$1,795.00
Extra cartridges:		$ 100.00
10 C System	10 Megs:	$1,845.00
20 C System	20 Megs:	$1,995.00
22 C System	22 Megs:	$2,695.00
34 C System	34 Megs:	$3,495.00

AVAILABLE FROM:
System Peripherals Consultants
9747 Business Park Ave.
San Diego, CA 92131
619 693-8611

Accent.mor

USES:
This includes an EPROM chip and software that will display and print accents needed in French, Spanish, and German. A software patch program modifies your WordStar(tm) program.

INSTALLATION:
Involves replacing an EPROM chip on the main board and installing the software patch to Wordstar(tm). Instructions are provided.

TECHNICAL: N/A

PRICE: $200.00

AVAILABLE FROM:
Bee.Mor Enterprises
22 182nd Ave.
Sumner, WA 98390
206 862-6310

Pro-character ROM

USES:
There are two ROM chips in each KAYPRO: a monitor ROM and a character ROM. The monitor supplies information for the Z-80 processor and the character ROM determines how the characters will appear on the screen.

The Pro-character ROM will modify the character set to improve such letters and characters as: g, q, y, f, t, commas, and semi-colons on 1983 and earlier KAYPRO 2 and KAYPRO 4 computers.

The Pro-character ROM also corrects a "snow" problem seen in earlier KAYPROs. The Micro Cornucopia character ROM is available with or without the standard KAYPRO Greek characters. The latter version (Clean ROM) is for KAYPRO owners who see Greek characters on the monitor when tying into a mainframe computer.

INSTALLATION:
Simple ROM chip swap on the main board takes 5 minutes.

TECHNICAL:
The Pro-character ROM does not work on newer KAYPRO 4/84s or KAYPRO 10s, although a new ROM is being developed for those models.

PRICE:
Pro-character ROM: $29.95
Clean Character ROM: $29.95

AVAILABLE FROM:
Micro Cornucopia
P.O. Box 223
Bend, OR 97709
503 382-8048

Programmer 4+

USES:
An EPROM is a chip that supplements the read-only memory. It is erasable and programmable.

Reprogramming an EPROM changes the internal messages it provides to the computer. To accomplish this, you need an EPROM programmer. The Programmer 4+ connects directly to the RS232C port on your KAYPRO. You may then install custom programs or instructions for the character or monitor EPROMS and more. The message to "Insert your disk into drive A" is a typical EPROM message. A manual, schematic form, software, and source code are included.

INSTALLATION:
Ties directly to the RS232 port.

TECHNICAL:
The Programmer 4+ reads and programs 2716, 2732, 2764, and 27128 EPROMS. This unit programs, verifies, and dumps in both ASCII and HEX.

PRICE: $199.95

AVAILABLE FROM:
Periphco
Suite 1
1659 Scott Blvd
Santa Clara, Ca 95050
408 244-5214

Pro-Monitor ROM

USES:
The Pro-Monitor ROM features an optional non-blinking block cursor and faster disk accesses. They are different for the KAYPRO 2 and the KAYPRO 4, so specify when ordering.

Pro-Monitor 8
In addition to providing the same functions as the Pro-Monitor ROM, the Pro-Monitor 8 will allow you to boot from any KAYPRO disk. The system will automatically recognize the type of disk which is placed in the drives. You may also turn any character into a blinking or non-blinking cursor.

Its most important feature is that it provides information the computer needs when adding a 784K quad-density disk drive.

INSTALLATION:
These ROM chips are swapped for the factory chips on the main board. Instructions are included.

TECHNICAL:
The Micro Cornucopia Pro-Monitor ROM supports a 5 MHZ CPU. The Micro Cornucopia Pro-Monitor 8 will support 784KB quad-density Tandon 100-4 drives.

PRICE:
Pro-Monitor ROM: $29.95
Pro-Monitor 8 ROM: $49.95

AVAILABLE FROM:
Micro Cornucopia
P.O. Box 223
Bend, OR 97709
503 382-8048

Co-Power 88

USES:
SWP's Co-Power 88 is a powerful 8088 co-processor that enables your KAYPRO to run both MS-DOS and CP/M-86 operating systems. This allows you to use many programs written in MS/DOS(tm), which is a 16-bit based operating system. The MS/DOS(tm) operating system can also handle larger spreadsheets.

The Co-Power 88 also functions as a RAM disk. A RAM disk allows you to "load" long or intricate programs into the unused RAM chips while in the CP/M operating system. The program then runs much more quickly because the computer does not have to retrieve as often from floppy drives.

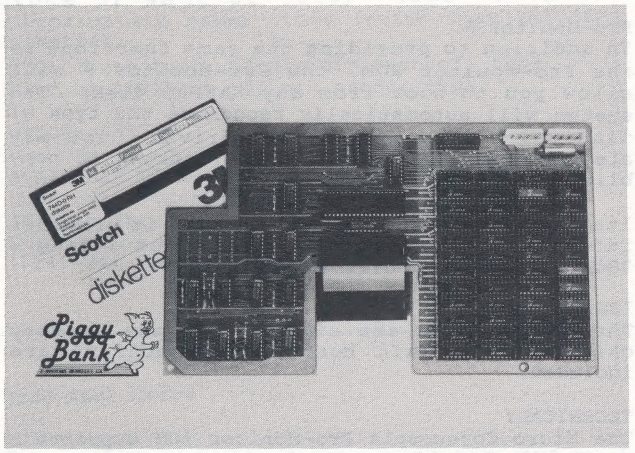
INSTALLATION:
The Co-Power 88 is configured in two different boards: 1) a small piggy back board that fits between the Z-80 chip and the main board and 2) a board that fits on top of the two drives. Included are: all cabling, a software program that allows you to go into MS/DOS or the RAM

disk, an owner's manual, and installation instructions.

TECHNICAL: N/A

PRICE: 128k with MS-DOS: $400.00
256k with MS-DOS: $500.00
CP/M-86: $ 60.00

AVAILABLE FROM:
SWP Microcomputer Products
2500E. Randol Mill Rd. Suite 125
Arlington, TX 76011
817 469-1181



Piggy Bank Ramdisk/Memory

USES:
The Piggy Bank(tm) provides 384K which functions as a RAM disk storage system and as bank-switched memory. The software provided will allow you to set the RAM disk to appear as an ordinary third disk. It can be configured to appear as DRIVE A to Z.

A RAM disk allows you to "load" long or intricate programs into the RAM chips. They will then run more quickly because the computer does not have to retrieve material from the floppy disk drive as often.

Bank-switched memory allows you to use CP/M 3.0 and use 384K+ memory rather than 64K of RAM in your KAYPRO computer. This means you may use multifunction or integrated programs that require more than 64K of random access memory.

INSTALLATION:
The Piggy Bank consists of a single board that installs between the Z-80 chip and the main board. It comes with software, installation instructions, and a user's guide.

TECHNICAL:
Not available for newer KAYPRO models (1984). The Piggy Bank is compatible with CP/M 3.0. CP/M Plus(tm) must be purchased separately to utilize the Piggy Bank as bank-switched memory.

AVAILABLE FROM:
E Systems Berkeley
2308 Fourth St.
Berkeley, CA 94710
415 486-0686

Graphics Board

USES:
Producing computer-generated bar graphs and pie charts can be helpful for presentations and situations where you need a more visual perspective for projects. Graphics are also an exciting way to introduce young people to computers.

The graphics adaptor board makes efficient use of the existing character matrix of the 1983 KAYPRO 2 and KAYPRO 4 to allow you to draw fully-justified straight lines and block graphics.

TECHNICAL:
Special features include capabilities for reverse video and alternating lines of reverse and normal video.

INSTALLATION:
The SSS graphics adapter board piggy backs through the Z-80 chip. It comes with the necessary software and hardware.

PRICE: $175.00

AVAILABLE FROM:
The Computer Shoppe
Village Center, Box 617
Great Falls, VA 22066
703 759-6800
800 368-8088

High-speed Upgrade

USES:
A high-speed upgrade allows your 1983 KAYPRO 2 or KAYPRO 4 to run at 5.0 megahertz instead of 2.5. This board doubles the processing speed of your KAYPRO. It is ideal for spreadsheet calculations and data base sorts. Many functions in word processing are greatly enhanced by the increased speed of operation.

The speed can be adjusted by a three-way toggle switch mounted on the rear of the machine.

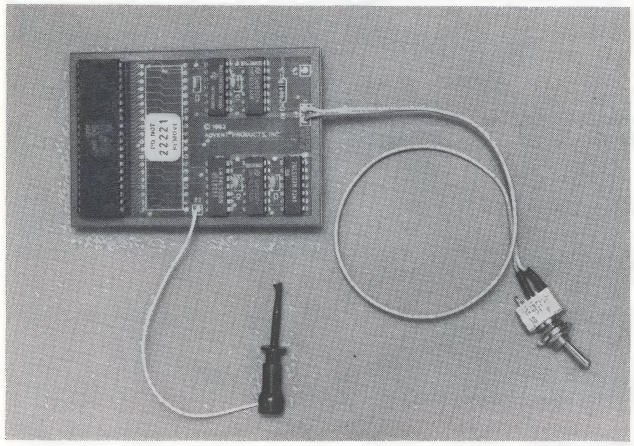
INSTALLATION:
There are two models available, one that requires soldering and one that does not.

The first high-speed kit includes a board that piggy backs to the Z-80 chip and a toggle switch that mounts to the vents or user-drilled hole on the rear of the chassis. Installation is quick and easy. The second requires a socket replacement and quite a bit of soldering. Instructions for both are included.

TECHNICAL:
The high-speed board uses a Z-80B chip.

PRICE:
Plug-in installation: $150.00
Solder installation: $125.00

AVAILABLE FROM:
The Computer Shoppe
Village Center, Box 617
Great Falls, VA 22066
703 759-6800
800 368-8088



5 MHz Turbo Board

USES:
The high-speed turbo board allows your 1983 KAYPRO 2 or KAYPRO 4 to run at 5.0 Megahertz instead of 2.5. This board doubles the processing speed of your KAYPRO. It is ideal for spreadsheet calculations and data base sorts. Many functions in word processing are greatly enhanced by the increased speed of operation.

The speed is switch-selectable (normal or turbo-charged) and can be changed at any time without affecting the operation of the computer. For 1983 and earlier KAYPRO 2 and KAYPRO 4.

INSTALLATION:
The Advent turbo board is simply installed by plugging into the Z-80 socket. The turbo board itself has a Z-80B chip. Drilling on the rear of the chassis is required for the toggle-switch mounting.

PRICE: $99.95

AVAILABLE FROM:
Advent Products
965 North Main St.
Orange, CA 92667
714 997-0800

Speedpro Board

USES:
The high-speed Speedpro board allows your 1983 KAYPRO 2 or KAYPRO 4 to run at 5.0 megahertz instead of 2.5. This board doubles the processing speed of your KAYPRO. It is ideal for spreadsheet calculations and data base sorts. Many functions in word processing are greatly enhanced by the increased speed of operation.

This accessory board is designed for faster performance on 1983 and earlier KAYPRO 2 and KAYPRO 4. The microprocessor is a Z80B CPU.

INSTALLATION:
Installation involves connecting two ribbon cables and DIP connectors for socketed KAYPRO main boards or one ribbon cable and two single conductors with "jiffy clips" for non-socketed KAYPROs.

The RTC model comes with software which includes an appointment system and file-date stamping. Access to the RTC is by indirect port addressing via the PI/O.

PRICE: Speedpro-5+: $ 89.95
Speedpro-5RTC: $159.95

AVAILABLE FROM:
Digital Dynamics
P.O. Box 5653
Tacoma, WA 98405
206 627-0797

CPU Hop Up Kit

USES:
A high-speed upgrade allows your 19^3 KAYPRO 2 or KAYPRO 4 to run at 5.0 Megahertz instead of 2.5. This board doubles the processing speed of older KAYPROs. It is ideal for spreadsheet calculations and data base sorts. Many functions in word processing are greatly enhanced by the increased speed of operation.

The speed can be adjusted by a three-way toggle switch mounted on the rear of the machine.

INSTALLATION:
The high-speed kit includes a board that needs soldering to the main board via a socket provided. It also includes a toggle switch that mounts to the vents or user-drilled hole on the rear of the chassis. Instructions are included.

TECHNICAL:
The high-speed board uses a Z-80B chip.

PRICE: $118.00

AVAILABLE FROM:
Legacy Computer Products
26356 Carmel Rancho Lane
Carmel, CA 93923
408 625-6562

110/220 Volt Selection

USES:
The ability to switch between 110 and 220 volts becomes important when you are traveling outside of the United States with your KAYPRO or using it in construction situations where 220v is common.

It includes an externally-mounted safety toggle switch that needs a small screwdriver or nail

file to operate. This allows you to select the voltages without removing the hood and the main board to get to the selector prong on the power supply.

INSTALLATION:
The volt selector is installed by soldering to the prongs on the power supply and drilling for the switch on the rear of the chassis.

PRICE: $50.00

AVAILABLE FROM:
The Computer Shoppe
Village Center, Box 617
Great Falls, VA 22066
703 759-6800
800 368-8088

A/B Disk Drive Log-in Switch

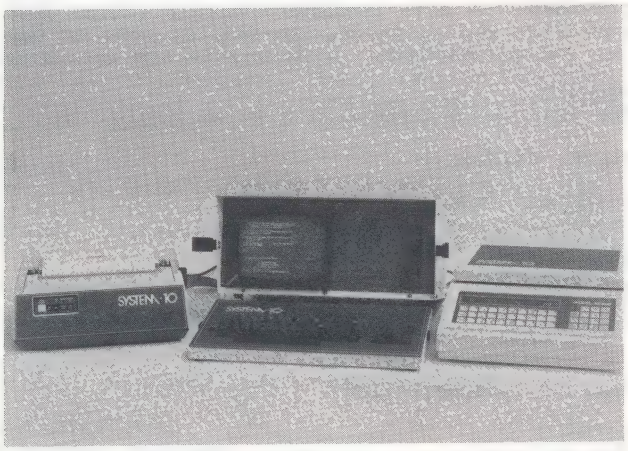
USES:
If your A drive becomes misaligned or has a malfunction, you may not be able to boot up the machine to check it. This neat little device allows you to boot up the computer on either the A or B drive. One logical use is during travel when you may not be near an authorized KAYPRO service center.

It also allows you to copy disks using only one of the two KAYPRO drives.

INSTALLATION:
A simple chip exchange on the main board with a set of wires leading to a toggle switch on the rear of the chassis completes this installation. Tools needed are a drill for the toggle hole and a screwdriver for hood removal.

PRICE: $40.00

AVAILABLE FROM:
The Computer Shoppe
Village Center, Box 617
Great Falls, VA 22066
703 759-6800
800 368-8088



Parcel Manifest System

USES:
Weighing and keeping track of large mailings often requires an expensive system that may prove cost-prohibitive for the smaller business. If the other parts are able to interface, using a KAYPRO computer for the data base storage is a logical alternative.

The System 10 manifest system includes a KAYPRO computer, a Okidata Microline 92 printer, a postal scale, and software.

The MX 3000 system is based on the KAYPRO 2, and the MX 5000 system is based on the KAYPRO 10. Possible configurations include an electronic scale, a laser scanner, a bar code reader, and a mainframe interface.

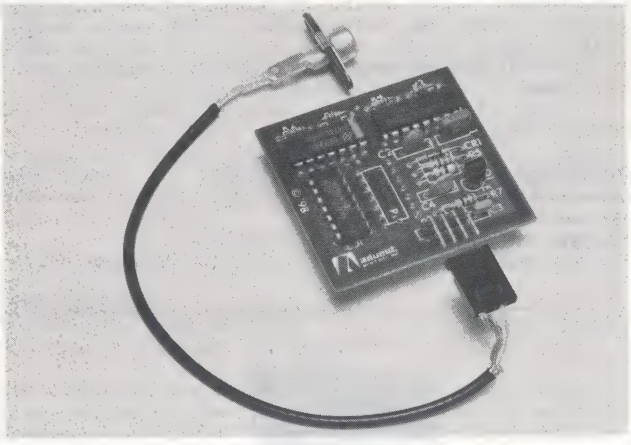
PRICE: The price varies depending on system configuration.

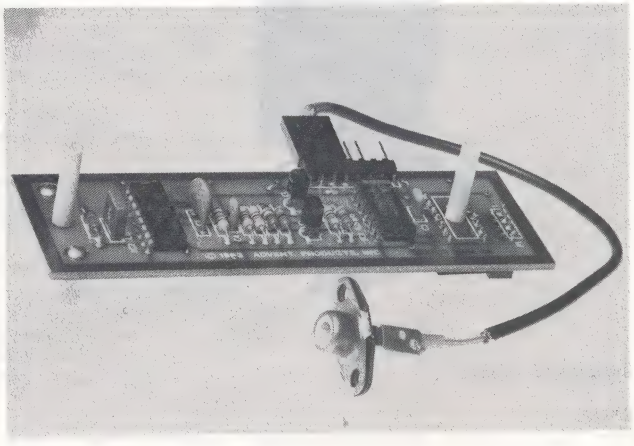
INSTALLATION:
None required; RS232 hook-up.

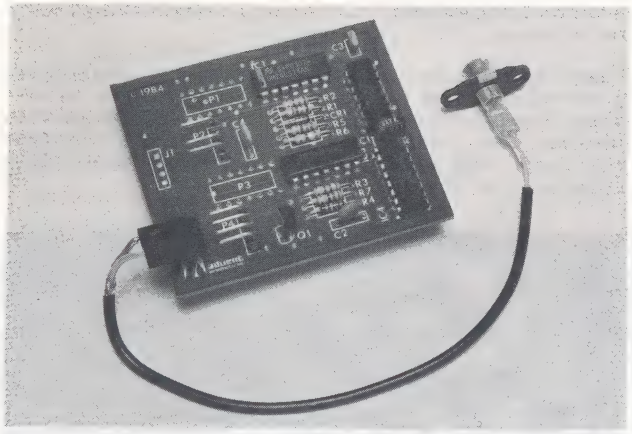
AVAILABLE FROM:
System 10
2011 N. Capitol Ave.
San Jose, CA 95132
408 946-1010

External Monitor Adaptor (EMA)

USES:
Often, in certain desktop or educational applications, a larger screen is needed. The EMA is a simple add-on board which allows the KAYPRO to drive larger screen monitors in monochrome. The EMA may also drive a TV through a VTR or an RF modulator common to most video games.







The EMA can drive large-screen televisions or projection systems for educational, classroom, or seminar applications. If the user has a color monitor or TV, the EMA is also capable of driving it in the monochrome mode. Advent has modified a COMEREX CR-5600 monitor for better resolution. Typically, hooking a KAYPRO to a monitor will yield better results than those achieved through a conventional TV set.

INSTALLATION:
A minimum of technical knowledge is needed to install the EMA. Instructions are clear, and the procedure requires only hand tools and simple soldering. You may wish to have your KAYPRO dealer install it for you.

PRICE: KAYPRO 2 and 4: $ 69.95
KAYPRO/84: $ 99.95
KAYPRO 10: $109.95
Modified Monitor: $159.95

AVAILABLE FROM:
Advent Products
965 North Main St.
Orange, CA 92667
714 997-0800

K Talker

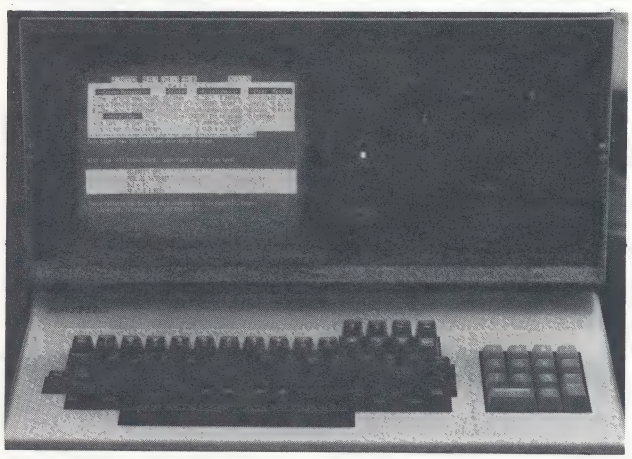
USES:
The K Talker system is a voice synthesizer that allows the sight-impaired or the blind to utilize a KAYPRO computer. Features of the K Talker system include:

- Characters are vocalized as they are entered from the keyboard;
- Words are vocalized as they are sent to the computer's screen from application programs;
- Users can review what has been sent to the screen;
- Users can bypass the computer and utilize the synthesizer directly.

INSTALLATION:
The K Talker installs easily to the RS232 port.

PRICE: K Talker software and installation manual: $250.00
Echo(tm) GP Speech Synthesizer: $270.00
K Talker Instruction Tape: $ 25.00
K Talker Demo Disk: $ 10.00

AVAILABLE FROM:
K Talker Sales
P.O. Box 81082
Seattle, WA 98108
206 722-8599



AT-1 Video Attribute Board

USES:
The AT-1 Video Attribute Board adds reverse video, reduced intensity, blinking, and reverse video display to the 1983 KAYPRO 2 and KAYPRO 4. Also included is a program which will modify your present KAYPRO software package to use these new attributes.

TECHNICAL:
The AT-1 video board also provides multiple terminal emulation, screen dump, Zenith Z-19 graphics, cursor on and off, keyboard character translation, and a keyboard buffer.

INSTALLATION:
The AT-1 installs in minutes using a plug-in board to the main board. In some of the newer KAYPRO models, soldering may be required.

PRICE: $149.95

AVAILABLE FROM:
JFN Industries
361 N. Fuller Ave
Los Angeles, CA 90036
213 939-4105

GR-1 Graphic Upgrade

USES:
This device allows you to use all the wonderful features of the the Epson printer. The GR-1 Graphics Upgrade adds Epson printer-compatible graphics and screen-dump character translation.

INSTALLATION:
A simple ROM change on the main board, along with a software configuration, is all you need to use the GR-1 upgrade.

PRICE: $49.95

AVAILABLE FROM:
JFN Industries
361 N. Fuller Ave
Los Angeles, CA 90036
213 939-4105

Sonic Digitizer

USES:
The Techsonix Digitizer is a full-featured take-off and estimating tool designed for construction, engineering, and architectural applications. The Digitizer does take-offs, quantity surveys, and pre-estimating functions, including calculating areas, lengths, square or cubic feet, volumes, and more. The Sonic Digitizer also computes roof areas automatically (including overhang and roof pitch) and stores quantities and dimensicns of entire jobs.

When the light pen-type stylus is drawn along a line on a set of building plans, it emits a sound that enables the KAYPRO computer to determine the XY coordinates and the distance to be figured.

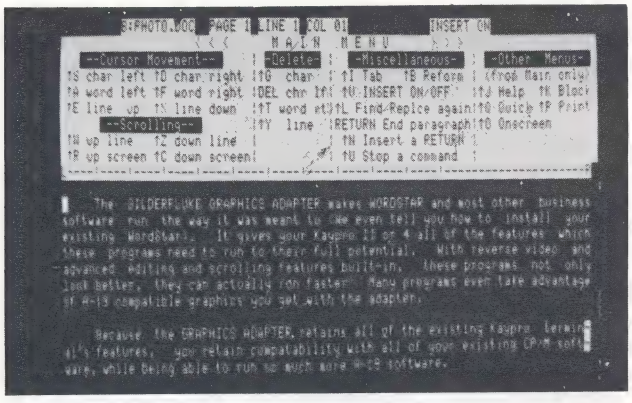
A menu is provided on the desktop that is used to activate the stylus or change functions. The system includes all hardware and the software.

INSTALLATION:
Setting up the art board and positioning the KAYPRO computer and control unit is a simple one-hour job.

TECHNICAL:
Resolution: Ø.Ø1 inches or Ø.Ø1cm
Sound source: Stylus or cursor with 1Ø ft cable
Reproducibility: + or - 1 count
Active area: 6Ø" x 72"
Interface: RS232C
Digitizing rate: 5Ø coordinate pairs per second
Accuracy: 1/1ØØth of a foot per 1" digitized

PRICE: $9990.ØØ

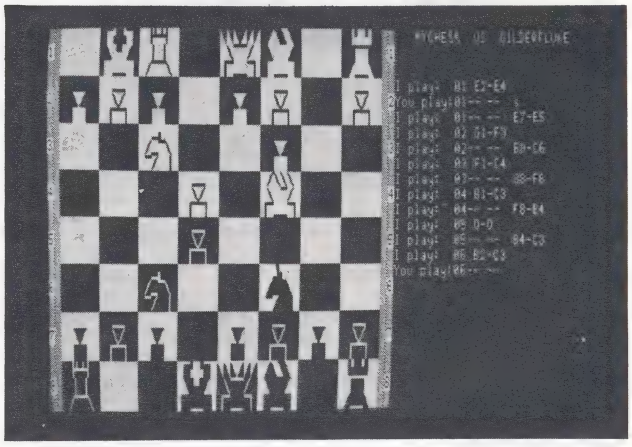
AVAILABLE FROM:
Techsonics Corp.
2251 San Diego Ave.
San Diego, CA 92210
619 296-6313



Graphics Adapter

USES:
The Gilderfluke Graphics Adapter enables the KAYPRO terminal to emulate most of the functions of the popular Heath/Zenith H-19 terminal. This allows access to a wealth of graphics games and business software. It also provides VT-52 query acknowledgement to simplify tying into mainframes.

Features include: reverse video, true lower-case descenders, and 64 graphics characters; screen dump capability; 9 function keys; protected 24th status line, cursor position report, save cursor position, and return cursor position capability; enhanced delete and erase functions.



TECHNICAL: N/A

INSTALLATION:
The graphics adapter is a 3-1/2" by 4" PC board. Installation is simple in socketed KAYPROs, but in non-socketed machines, minor soldering and cutting are required.

PRICE: $175.ØØ

AVAILABLE FROM:
Gilderfluke & Co.
12Ø Midway Dr.
SP Ø13
Anaheim, CA 92805
714 776-22Ø7

Micro Movie Club

USES:
The Micro Movie Club is a complete store management system developed for the Video Rental business. The Micro Movie Club Package consists of a KAYPRO 1Ø microcomputer, an Epson FX-8Ø printer, an Indiana EL-2 Cash Drawer, and the Micro Movie Club software.

Micro Movie Club will hold records on 5,ØØØ members, 7,ØØØ movies and other merchandise, and up to 9ØØ daily transactions.

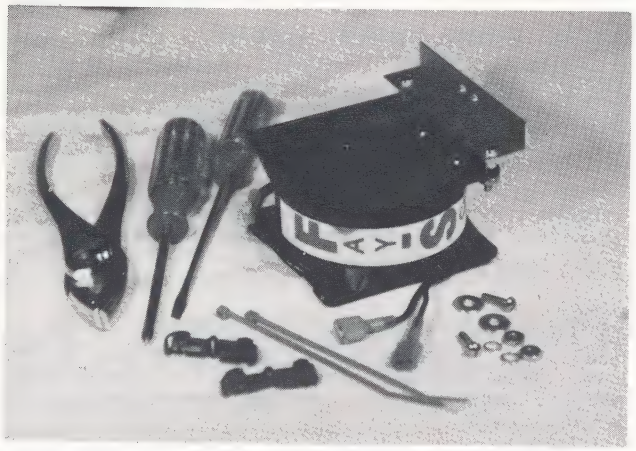
It will handle paid rentals, free rentals, lost rentals, returns, automatic pricing, deposit accounting, electronic punch cards, reservations, requested materials, merchandise sales, sales tax, cash balancing, and more.

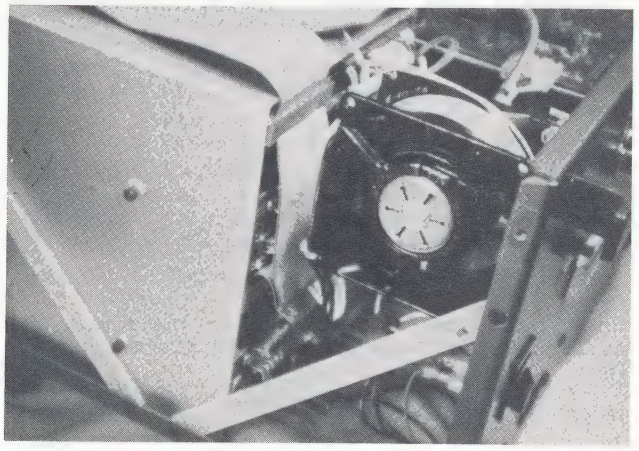
The system is designed for ease of use and even includes, appropriately enough, an installation videotape.

INSTALLATION:
Installation of the Micro Movie Club is done through the RS232 and Centronics ports at the rear of the chassis.

PRICE: $4995.00

AVAILABLE FROM:
Microfast Software Group, Inc.
Suite 1005
1200 Westlake North
Seattle, WA 98109
206 285-9199





Cooling Fan

USES:
When operating your computer in hotter than normal climates, you may wish to install a cooling fan. It will maintain a cooler environment for the disk drives and longer life for your computer and disks.

K-Kool is an internally-mounted cooling fan for the KAYPRO 2 and KAYPRO 4. It retains the quiet operation of the KAYPRO while reducing the internal temperature of the computer.

The fan exchanges the air inside the KAYPRO at a rate of fifteen times per minute. A/C power consumption is approximately 8 watts.

INSTALLATION:
The K-Kool fan installs in less than 30 minutes without soldering or drilling. It requires only a Phillips screwdriver and a set of pliers.

PRICE: Retail: $65.00
KUG Members: $49.00

AVAILABLE FROM:
Fay-Soft
31220 La Bayna Dr.
Suite 110
Westlake Village, CA 91362
805 496-3960

ULCnet Local Area Network

USES:
Local area networking is the linking of many microcomputers in an office to create a full system of information-sharing units. A number of computers may share databases, accounting information, or programs.

ULCnet is also available on new KAYPRO units from KAYPRO and is known as "KAYNET." It is a low-cost solution to resource-sharing among KAYPRO computers in an office environment. ULCnet permits up to 64 KAYPRO computers to be interconnected and to share files (both floppy and hard disk files) and printers. Electronic mail, print spooling/queuing, and message switching/broadcasting are also supported.

TECHNICAL:
UlCnet uses standard four-conductor telephone cable as network media and telephone-style RJ-11 jacks as network taps.

INSTALLATION:
ULCnet can be installed with hand tools by the owner. It is available for all models of KAYPRO computers.

PRICE: $400 - $500. (Please contact your KAYPRO dealer about prices and availability.)

AVAILABLE FROM:
Orange Compuco, Inc
Building C-8
3303 Harbor Blvd.
Costa Mesa, CA 92626
714 261-8075

400-800K Upgrade Kit

USES:
You may want to add a disk upgrade kit if you require extra storage space on your KAYPRO 2 for any reason, such as a large mailing list or extensive programming.

The Legacy 400K and 800K upgrade kits allow the standard KAYPRO 2 storage (200KB per drive) to be increased to either 400 or 800 kilobytes per drive.

Although the upgrade kit does not include the actual disk drives, they are available separately from the same supplier. This kit requires TEAC 55B and 55F drives. These new drives will still read and write the standard KAYPRO format. New format and copy programs are included.

INSTALLATION:
The installation is basically a straightforward drive swap. The upgrade kit allows the KAYPRO to read at the full capacity of the drive.

PRICE: 400K/800K Upgrade: $118.00
1 Drive for 400K: $340.00
1 Drive for 800K: $390.00

AVAILABLE FROM:
Legacy Computer Products
26356 Carmel Rancho Ln.
Carmel, CA 93923
408 625-6562

External Video Monitor

USES:
An external monitor may be used in a variety of situations from schooling to personal viewing comfort.

The Legacy external video monitor adapter allows the KAYPRO to add up to 16 external monitors (attached in series). The onboard video adapter comes complete with a horizontal sync alignment potentiometer.

INSTALLATION:
Installation requires the attachment of 5 wires and the insertion of a composite video jack through the cooling vents in the rear of the chassis. Light soldering is required.

PRICE: KAYPRO 2 and 4: $118.00
KAYPRO 10: $138.00

AVAILABLE FROM:
Legacy Computer Products
26356 Carmel Rancho Ln.
Carmel, CA 93923
408 625-6562

External Disk Kit

USES:
When dealing with numerous files on separate disks, especially in Perfect Writer, you may want to add an external disk drive. This allows you to remain in the program without having to warm boot the computer on disk change.

The Legacy external disk kit allows the addition of two more drives to your KAYPRO. These additional drives (C and D) must be the same recording type and density as the existing drives. The kit consists of a single printed-circuit board, BIOS EPROM, cables, and instructions. The actual drives are also available from Legacy.

PRICE: $118.00

AVAILABLE FROM:
Legacy Computer Products
26356 Carmel Rancho Ln.
Carmel, CA 93923
408 625-6562

Real-time Clock

USES:
A real-time clock will allow you to use executive management programs to keep track of appointments at the week or month level. Reminder messages are available on some programs. Real-time clocks will also keep track of the time of file addenda and programming speed.

The Legacy real-time clock provides the date and the time to the second.

Driver routines are provided on a disk for both assembly language and M-BASIC(tm), allowing you to use the clock with your own software. A Nicad battery is used for the power backup and is charged while you use your KAYPRO.

INSTALLATION:
The Time Clock installs in minutes by piggy backing to the main board through the Z-80 chip and replacing a PIO chip on the add-on board.

PRICE: KAYPRO 2 and 4: $118.00

AVAILABLE FROM:
Legacy Computer Products
26356 Carmel Rancho Ln.
Carmel, CA 93923
408 625-6562

Multi-fonts Video Graphics

USES:
If you have a desire to program in high-resolution graphics mode, this board may be for you. The current KAYPRO models have block graphic capabilities, but are restrained to 160 x 100 pixels.

The Legacy video graphics board provides high-resolution (512 x 256) bit-mapped graphics on the KAYPRO 2 and KAYPRO 4. It includes panning and zooming for graphics 1 to 16 times the original size. This kit is for 1983 and earlier models.

TECHNICAL:
This kit is based on the powerful NEC 7220 graphic display controller. Firmware for drawing line vectors, arcs, circles, rectangle, and point markers, as well as downline-loadable character sets, is included.

INSTALLATION:
Installation can be performed in the field, but we suggest you have your local dealer install it.

PRICE: $612.00

AVAILABLE FROM:
Legacy Computer Products
26356 Carmel Rancho Ln.
Carmel, CA 93923
408 625-6562

Screen Saver

USES:
A screen saver will prevent phosphor burns to the screen by characters or programs left at idle for long periods of time. (An example would be the Wordstar menu screen on display while the computer is not in continuous use.)

The Legacy Screen Saver automatically dims the KAYPRO screen after three minutes without keyboard input. Any keystroke will restore the normal display.

INSTALLATION:
The screen saver installs in minutes into the SIO socket on the main board.

PRICE: KAYPRO 2 and 4: $118.00
KAYPRO 10: $138.00

AVAILABLE FROM:
Legacy Computer Products
26356 Carmel Rancho Ln.
Carmel, CA 93923
408 625-6562

Arba Register System

USES:
The Arba System is a point-of-sale system which provides inventory control and real-time price look-up on a KAYPRO 10 computer. It can greatly increase your store's efficiency and provide transaction reports at any time.

The Arba System provides full reporting: recommended reorder quantities by item, vendor, and department, margin analysis, turn analysis, employee transactions, department transactions, and price tag printing.

Up to 99 departments and 65,000 inventory items can be handled by this system. The cash register is a modified Sanyo ECR 550.

INSTALLATION:
The Arba System easily installs on the KAYPRO 10 computer through the RS232 port. Total installation, including software configuration to the KAYPRO, is estimated at 20 minutes.

PRICE: Model 5000: $1395.00
Arba Software with Accounting Plus Inventory Control: $1200.00
Integrated Arba Software with Accounting Plus Modules: $600.00 each

AVAILABLE FROM:
Arba Corporation
890 E. Roosevelt Rd.
Lombard, IL 60148
312 620-8566

External Video Generator

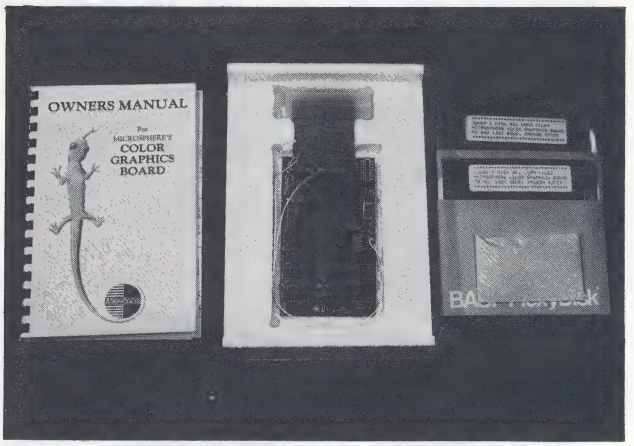
USES:
An external monitor may be used in a variety of situations from schooling to personal viewing comfort and ease. The Microsphere Video External board reproduces the exact dot image of the KAYPRO screen on larger monitors that are connected to the video jack on the rear of the chassis.

The models for the '84 machines also include an additional ROM chip that produces a 10 x 8 pixel character and graphics characters. This allows compatibility to a standard composite video monitor.

INSTALLATION:
Installation requires the insertion of a composite video jack through the cooling vents in the rear of the chassis and tying into the mainboard.

PRICE: KAYPRO 2 and 4: $59.95
KAYPRO 2-84, 4-84 & 10: $89.95

AVAILABLE FROM:
Microsphere, Inc.
P.O. Box 1221
Bend, OR 97709
503 388-1194



Color Graphics Board

USES:
The Microsphere Color Graphics Board features 256 x 192 pixel resolution, 16 colors, and 32 sprites.

Sprites allow you to move blocks more easily and smoothly than if the block were to be turned off and on into new positions.

The software includes three editors, drivers, screen-to-printer and screen-to-disk utilities, and a six-month subscription to Micro Cornucopia magazine. The graphics board generates standard composite color which is directly usable on a color monitor.

You may add another monitor and have programming on one and watch as the graphics change on the other. An RF modulator is required for use with a color television set.

INSTALLATION:
Plug-in installation. The color board installs easily on a 40-pin socket on the KAYPRO mainboard.

PRICE: $245.00

AVAILABLE FROM:
Microsphere, Inc.
P.O. Box 1221
Bend, OR 97709
503 388-1194

8" Drive Expansion Controller

USES:
In software or computer store situations or when a company has two or more computers (a KAYPRO and a model with 8" drives), it is necessary to have an adapter to read directly to that drive from the KAYPRO.

This controller board allows you to connect an 8" drive to your KAYPRO. The new drive is configured as drive C for all CP/M functions. The 8" drive, as mentioned above, can also serve to download software from an 8" format.

The disk drive and the power supply are sold separately.

INSTALLATION:
The adapter board installs to the main board.

Some soldering is required. It is recommended that your dealer handle the installation.

PRICE: $249.00

AVAILABLE FROM:
Custom Electronics
3134 N. Palm
Fresno, CA 93704
209 442-1816

Logic Analyzer/Computer

USES:
The Omni 4 include three powerful engineering troubleshooting aids:
- A 16-channel Logic Analyzer;
- a KAYPRO 4 computer;
- a 14-point Signature Analyzer.

The Omni 4 is specially designed to provide a compact, cost-effective, and easy-to-use instrument for the design and production engineer, field service technician, electronics educator, and others.

It can collect 100 data samples on each of 16 channels or 500 samples on each of up to 32 channels. Four channels of glitch detection are provided with a minimum detectable pulse of 10 nanoseconds.

The system utilizes internal or external clocks as fast as 20 MHz, either of which may be qualified. Capability to trigger on data or glitch inputs logically combined with AND, OR, or NOT functions.

Omnilogic modifies your KAYPRO 2 or KAYPRO 4 to the capability of the Omni by the installation of two additional PCBs (1 interface, 1 high-speed logic). Two TTL or CMOS probes, software, and manuals are provided.

PRICE: Omni 2: $3950.00
Omni 4: $4495.00
Upgrade: $2450.00
Demonstration Disk: $15.00

AVAILABLE FROM:
OmniLogic, Inc.
350 Sunset Blvd North
Renton, WA 98055
800 228-OMNI
206 271-2000

Floppy Ram Page

USES:
A ram disk allows you to "load" long or intricate running programs into the ram chips. They will then run about 20 times faster because the computer does not have to search through a diskette for information.

The Floppy Ram Page provides 128K of extra RAM which functions as a RAM disk electrical storage system and as bank-switched memory. The software provided will allow you to set the RAM disk to appear as an ordinary third disk. It can be configured to appear as drive A to Z.

INSTALLATION:
Internal plug-in installation. It consists of a single board that installs between the Z-80 chip and the main board. It comes with software, installation instructions, and user's guide.

TECHNICAL:
The board comes with 128K of RAM and is expandable to 256K.

PRICE: Floppy Ram Page: $399.95
Additional 128K: $199.95

AVAILABLE FROM:
Logical Extensions
P.O. Box 261
San Ramon, CA 93015
415 828-7566

Internal Amber Screen

USES:
For some people, an amber screen is more comfortable for the eyes, especially if the user spends hours in front of the screen.

This nine-inch amber screen replaces your factory CRT. The screen is high-resolution, high-contrast, and anti-glare like the screens on the '84 KAYPROs.

INSTALLATION:
A manual is available to guide the user through the installation. Special tools are included for easy. do-it-yourself installation.

PRICE: $89.95

AVAILABLE FROM:
Amber Visions
Suite 192
878 Jackman St.
El Cajon, CA 92020
619 579-2435

Labelmate 1

USES:
The Labelmate/Loggen software package used with the KAYPRO 2, KAYPRO 4, or KAYPRO 10 and an Epson printer will economically produce bar code labels in the special format now required from Department of Defense and General Services Administration (GSA) contractors.

Labelmate 1 includes a decoder module, a wand scanner, and Loggen or Bargen software.

```
IDENT 000-04
*MASTER*
DIM IN .0001 INCHES
NS CODE    0
MFG CODE   12345
COMM CODE 67890
MOD CHECK 5
MAG        100
BWR        003
BWR DIFF -003
LIGHT      50 %
DARK       00 %
SYMBOLIZED SYSTEMS
    AUTO-SCAN
```

0 12345 67890 5

Loggen software produces MIL-STD 1189 and 129h LOGMARS labels.

Bargen software places 1-9 lines of text above and/or below the bar code.

PRICE: Labelmate 1 + Loggen or Bargen: $ 975.00
Labelmate 1 + Loggen and Bargen: $1095.00

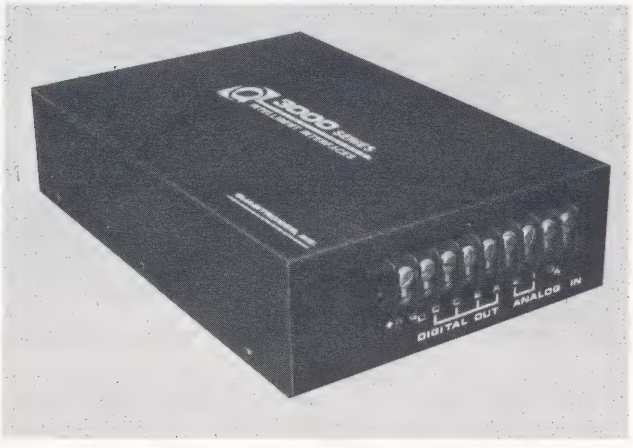
AVAILABLE FROM:
Symbolized Systems, Inc.
3231 W. MacArthur Blvd.
Santa Ana, CA 92704
800 432-3191
800 854-3278 (CA)

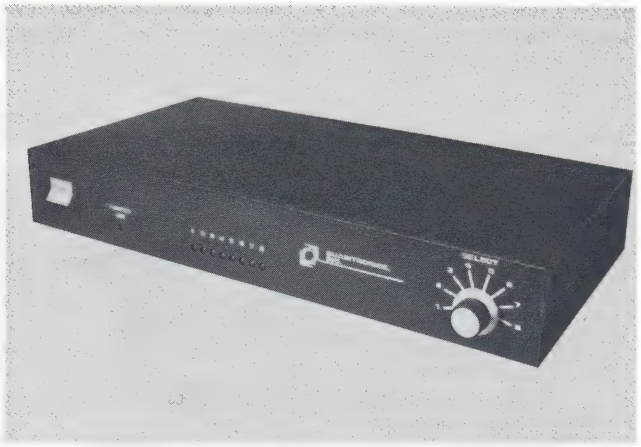
Q-3024 Interface

USES:
Monitoring equipment with a computer usually involves an IEEE port much like the RS232C port you have on your KAYPRO. This interface allows you to use the functions of an IEEE port.

The Q-3024 Interface hardware is used to control data collection and to monitor, control and actuate alarms, motors, pumps, heaters, laboratory apparatus, and a host of other equipment. This interface has 2 high- resolution analog inputs and 4 digital outputs.

It is programmable through KAYPRO in BASIC, and sample programs for various situations are included on disk.

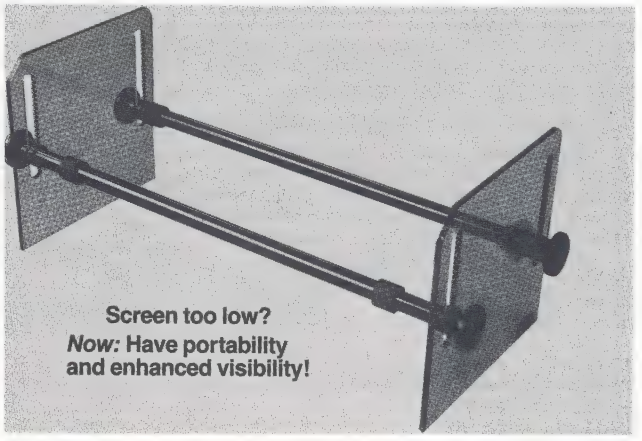




INSTALLATION:
Connects to the RS232C port.

PRICE: $495.00

AVAILABLE FROM:
Quasitronics, Inc.
211 Vandale Dr.
Houston, PA 15342
800 245-4192



Sabon Stand

The Sabon(tm) Stand allows you to bring the computer screen to a comfortable viewing height and angle. The Sabon Stand is unique because it tilts up or down at any height by a simple turn of a knob. It is sturdily constructed of acrylic, steel, brass, nylon, and neoprene. Available with bronze tint or clear side panels.

PRICE: $ 99.95

AVAILABLE FROM:
Sabon Industries
P.O. Box 177
Fairfield, CA 06430
203 255-8880

Custom Engraved Keytops

Arkay Engravers manufactures custom keytops for the Kaypro keyboard. Customers specify the legends and colors for their keytops. A keytop removal tool and key switches are sold separately.

AVAILABLE FROM:
Arkay Engravers, Inc.
2073 Newbridge Rd.
Bellmore, NY 11710
516 781-9859

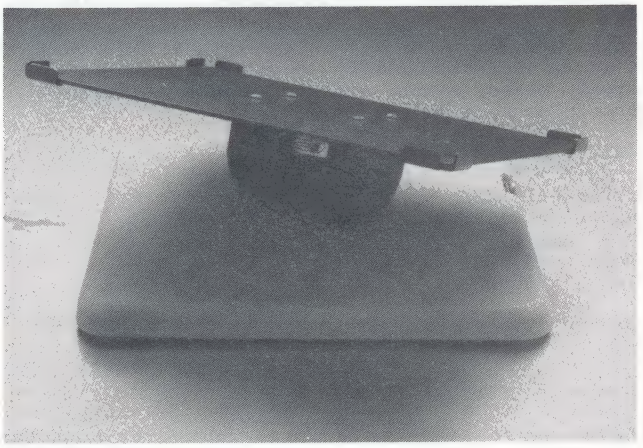
Desktop Stand

The Icarus desktop stands tilt the computer up to a maximum angle of 25 degrees so the screen can be easily seen. Under the stand there is a protective storage space for the keyboard. Icarus stands feature a baked urethane enamel finish, heavy-gauge aluminum alloy, and neoprene feet to protect your desktop from scratches.

The model 2300 has a computer switch which controls two outlets on a separately-fused circuit with transient and EMI protection. Printer and auxiliary switches on the model 2300 control fused, transient-protected outlets. The model 2100 has no electrical hookups.

PRICE:
Model 2100: $ 69.95
Model 2300: $169.95

AVAILABLE FROM:
Icarus Systems
Suite 14-325K
2303 N. 44th St
Phoenix, AZ 85008
602 840-6685



Ergotron Pedestal Base

The Ergotron Pedestal Base swivels 360 degrees and tilts up to 30 degrees. Special features include a full rotation with one hand by the operator from a seated position and a unique tilt-friction system which allows easy adjustment. A cable anchor is mounted on the stationary base to help prevent wear of power cables.

PRICE:
Model T/R-77B KAYPRO: $ 129.95

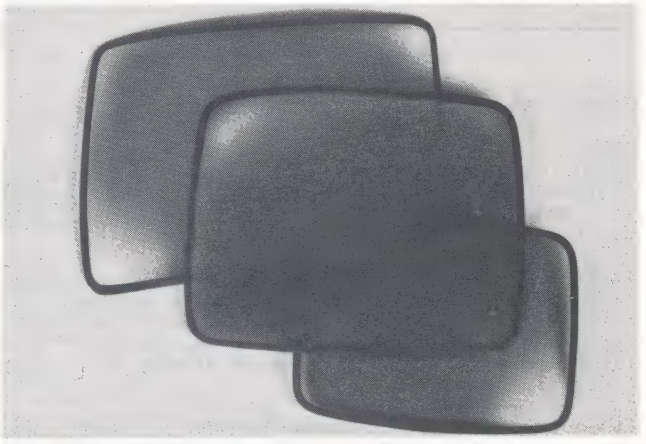
AVAILABLE FROM:
PCRep Computer Accessories
Suite 3000
4000 MacArthur Blvd
Newport Beach, CA 92660
714 851-6436

VU.MOR

The Vu.mor is a copy stand that holds papers, books, notebooks, or extra floppies. The stand mounts on the top of the Kaypro. Vu.mor is made of 3/16" ABS plastic and measures 12" x 17".

PRICE: $ 19.95

AVAILABLE FROM:
Bee.Mor Enterprises
22-182 Avenue East
Sumner, WA 98390
206 862-6310



Anti-Glare Screen

Omnium's CRT Optimizer(tm) provides a low-reflective surface. The Optimizer is made of etched polyester and has an easy-to-clean, smooth surface. The screen is easily attached to the monitor.

Colors: Gray or Green tint
Weight: 9 oz.

PRICE: $ 39.00

AVAILABLE FROM:
Omnium Corporation
205 N. Second St
Stillwater, MN 55082
800 328-0223

CLIP.MOR

An accessory which clips books to the Vu.Mor copy stand so that the book stays open to the page you need.

PRICE: $ 4.95

AVAILABLE FROM:
Bee.Mor Enterprises
22-182 Avenue East
Sumner, WA 98390
206 862-6310

Copy Easel

The Copy Easel mounts in seconds to either the top or the side of your Kaypro. Made of high-impact 3/16" Kydex. The Copy Easel positions material for easy viewing or can hold extra floppy disks.

PRICE: $ 29.95

AVAILABLE FROM:
CMB Enterprises
1571 Fenpark Dr.
Fenton, MO 63026

Porta-Micro Mate

The Porta-Micro Mate features surge protection and lighted front panel switches for your Kaypro and a printer. The two power sockets are mounted on the rear. The Porta-Micro Mate comes with a UL-approved surge-protection circuit that will detect any power spike and defeat it before it gets to your system. The Porta Micro Mate comes in two models: as a stationary unit or mounted on a swivel base for 180-degree positioning.

PRICE:
Stationary Model: $ 99.95
Swivel Model: $129.95

AVAILABLE FROM:
SOS Computers
362 S. LaBrea Ave
Los Angeles, CA 90036
213 857-0371

Adjustable Leg Set

The adjustable leg set raises the Kaypro to a comfortable viewing angle and takes full advantage of your detachable keyboard by allowing you to place the keyboard in the most convenient position.

PRICE: $ 25.00

AVAILABLE FROM:
Computer Shoppe
Village Center, Box 617
Great Falls, VA 22066
703 759-6800
800 368-8088

Keyboard Cable

This twelve-foot keyboard cable replaces the original cable and allows flexibility in keyboard placement.

PRICE: $ 12.95

AVAILABLE FROM:
Computer Shoppe
Village Center, Box 617
Great Falls, VA 22066
703 759-6800
800 368-8088

Pagemate

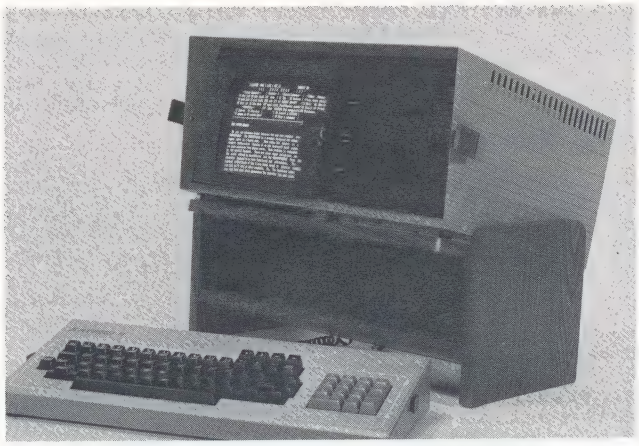
This copy stand is designed for holding books at the right angle for easy viewing. The Pagemate keeps your book open to the pages you select and is adjustable for books of different heights.

AVAILABLE FROM:
Computer Shoppe
Village Center, Box 617
Great Falls, VA 22066
703 759-6800
800 368-8088

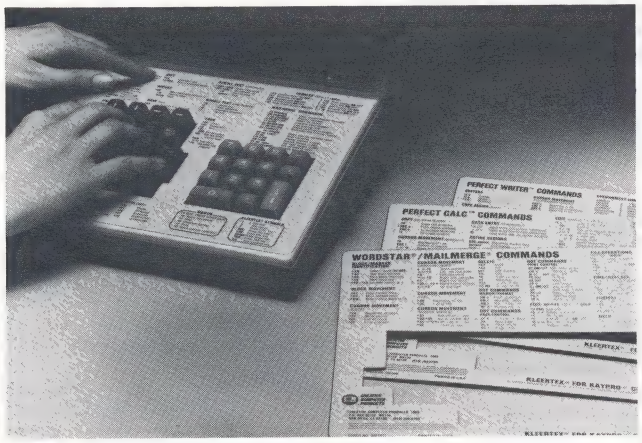
The Kaystand

The Kaystand is a stand for Kaypro computers. Four tilt positions allow adjustment for individual comfort. The Kaystand has a storage shelf for diskettes and comes in a honey walnut finish. A matching printer stand is also available. Assembly takes approximately five minutes using illustrated instructions.

PRICE: $ 45.00



AVAILABLE FROM:
FMF Computer Furniture
P.O. Box 1860
Simi Valley, CA 93062
805 522-0629



Kleertex Overlays

Four Keyboard overlay command cards for WordStar/MailMerge(tm), dBase II(tm), Perfect Writer(tm), and Perfect Calc(tm). Alphabetized commands to find what you need quickly and easily. Kleertex overlays provide an "at-a-glance" summary of your software to allow immediate access to all your program's features.

PRICE: $ 19.95

AVAILABLE FROM:
Creative Computer Products
P.O. Box 85152-MB 134
San Diego, CA 92138
800 523-5441 (CA)
800 231-5413

Custom Key Caps

Custom key caps for any function or command. Lettering can be applied to the front skirt as well as the top of the Spec-key. A variety of colors is available.

AVAILABLE FROM:
Spec Plastics
2449 N. Naomi St.
Burbank, CA 91504
818 840-8891

Covers

Advent carrying cases are made from durable Sunbrella. These Kaypro cases are available in dark brown, black, or navy and have two side pockets for manuals and diskettes.

PRICE: $ 34.95

AVAILABLE FROM:
Advent Products, Inc.
965 N. Main St.
Orange, CA 92667
714 997-0800

12' Keyboard Cable

This 12-foot cable replaces the 6-foot cable supplied with your Kaypro.

PRICE: $ 12.95

AVAILABLE FROM:
Advent Products, Inc.
965 N. Main St.
Orange, CA 92667
714 997-0800

Adjustable Computer Bags

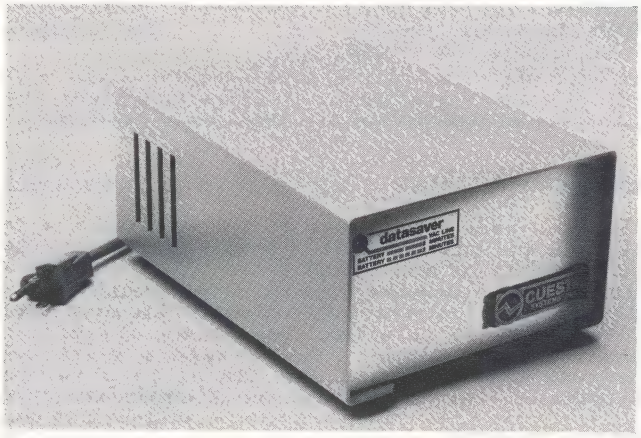
Double-wall Cordura(tm) fabric lined with high-impact nondisintegrating foam. Each bag has a heavy-duty handle and a 2-inch, padded shoulder strap (2,000 lb. test). Dupont Cordura Nylon is lightweight, waterproof, and washable. The COM275

has 2 side pockets for diskette cases, and the PC3005 has one large side pocket.

PRICE:
COM275 $ 129.95
Dimensions: 18" x 12" x 17 1/2"
Weight: 5 3/4 lbs.
Colors: Blue, Rust, Black, and Smoke

PC3005 $ 139.95
Dimensions: 19 1/2" x 17" x 10"
Weight: 3 lbs. 10 oz.
Color: Smoke Gray

AVAILABLE FROM:
KIWI Northern Mercantile, Inc.
6721 N.W. 36th Ave
Miami, FL 33174
305 835-8228 (FL)
800 541-4161



Datasaver

Datasaver is a battery-powered AC backup unit which protects against power fluctuations. Upon loss or interruption of input line power (a blackout condition) or an undervoltage situation (a brownout condition), Datasaver automatically switches to backup power within 1/100th of a second.

A front-panel indicator light and a buzzer alarm alert you when Datasaver is operating to allow you enough time to properly exit before there is an actual loss of AC power. Datasaver will supply from 4 to 15 minutes of power, depending on load.

PRICE:
90 watt: $ 395.00
200 watt: $ 695.00

AVAILABLE FROM:
CUESTA SYSTEMS
3440 Roberto Ct.
San Louis Obispo, CA 93401
805 541-4161

Carrying Case

Custom-made for the Kaypro. Features include: Cordura(tm) exterior, rugged nylon zippers, fabric webbing (2000 lb. test rated), metal hardware, double carry straps with mid-strap pad, 1/4" closed cell foam padding, exterior pocket with Velco closure, and a brushed-nylon liner.

PRICE: $ 79.95
Item V12015

Dimensions: 8 1/2"D x 17 3/4"W x 16"H
Weight: 2 1/4 lbs.

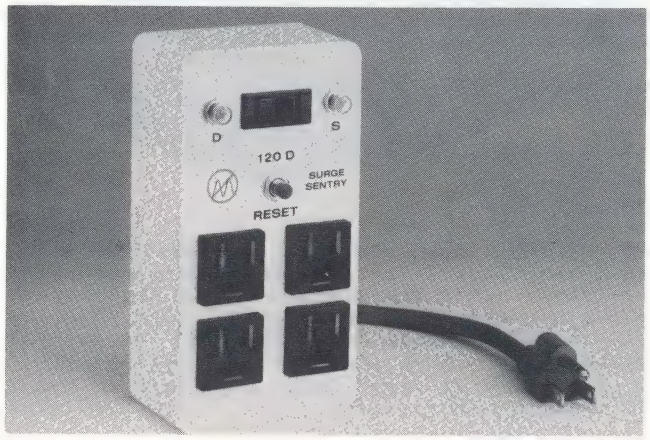
AVAILABLE FROM:
Cover Craft Corporation
P.O. Box 555
Amherst, NH 03331
800 547-5600
603 889-6811

Dustcover

Dustcovers made by Covers Unlimited(tm) will not dry out, crack, or become brittle. These heavy fabric covers are static-free, lint-free, and washable. The fabric allows ventilation and comes in navy, pewter, or sand. Your dustcover can be monogrammed with your personal or company logo. Two-piece covers have a separate keyboard cover.

PRICE:
1 piece: $ 19.95
2 piece: $ 32.95

AVAILABLE FROM:
Covers Unlimited
P.O. Box 381076
Germantown, TN 38183
901 754-4465 (TN)
800 892-1342



Data Line Protector

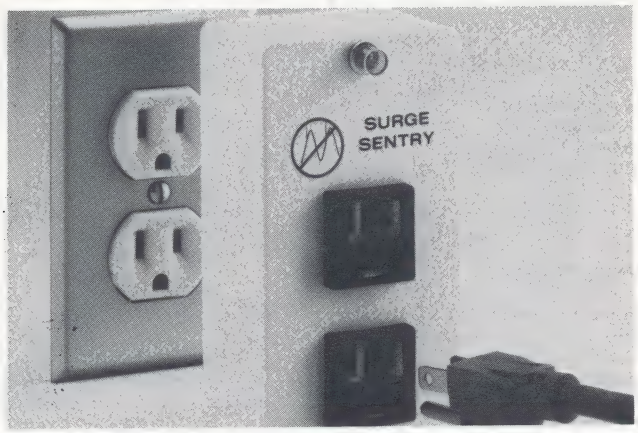
The data line protector guards your modem by constantly monitoring data communication lines for high-voltage spikes and transients. When a voltage spike is detected, it instantly clamps on the surge and absorbs the unwanted power from the data line.

The two-stage power-suppression device inside the Surge Sentry(tm) line protector is designed to provide the fastest reaction time to spikes with the highest power absorption level.

The Data Line Protector has a protection circuit incorporating silicon avalanche diodes and gas discharge tubes to cover the full range of power disturbance activity.

PRICE: $ 89.50

AVAILABLE FROM:
RKS Industries, Inc.
4865 Scotts Valley Dr.
Scotts Valley, CA 92110
408 438-5760 (CA)
800 892-1342



Surge Protectors

RKS Industries manufactures a full line of Surge Sentry(tm) surge suppressors. The Surge Sentry line has outlet-mounted models, models with a power cord, and from two to six outlets. RFI and EMI noise filtration is optional on all models. The Surge Sentry line detects and clamps transient impulses across the line and between each line and the ground. Rated dissipation is 1,500,000 watts at 100 microseconds.

AVAILABLE FROM:
RKS Industries
4865 Scotts Valley Dr
Scotts Valley, CA 95066
408 438-5760 (CA)
800 892-1342

Shipping Case

ATS shipping cases have specially-designed full-foam interiors. The gouge-resistant and chip-resistant exteriors are made of a high-impact plastic laminated to solid plywood that is reinforced by steel ball corners. The case is designed for use on common carriers or airlines.

PRICE: $ 182.00

AVAILABLE FROM:
ATS Cases. Inc.
25 Washington Ave.
Natick, MA 01760
617 653-6724

KAYware Copy Holder

The KAYware Copy Holder supports your books, manuals, notebooks, and single sheets above the CRT screen for comfortable viewing. The copy stand can be quickly removed and positioned unobtrusively against the closed Kaypro case for carrying ease. A #117 rubber band is included to retain the books in an open position and to hold the KAYware Copy Holder snugly against the bottom of the closed Kaypro case between the upper rubber feet. The KAYware Copy Holder is made of anodized aluminum.

PRICE: $ 16.95

AVAILABLE FROM:
KAYware
8319 Cheltenham Ave.
Philadelphia, PA 19118
215 233-2025

Anti-glare Filter

The Ergonomic anti-glare filter creates a soft look on the monitor. This anti-glare filter is constructed of micro-monofilament nylon fibers woven in a square-weave pattern, producing a grid pattern or "honeycomb" effect. The overhead lighting glare is eliminated, since the filter absorbs reflections. The filter is installed between the bezel and the CRT or as a Velcro attachment. All components are UL-approved.

PRICE: $ 43.20

AVAILABLE FROM:
Computer Accessory Products
Suite A
12401 Ventura Blvd
Studio City, CA 91604
800 223-8602 (CA)
818 760-7770

SDC Anti-glare Screen

The SDC "Anti-glare" consists of a fine micro-weave mesh stretched on an aluminum frame. The openings in the mesh are so small (less than 0.005 opening) that light actually refracts (or bends) as it passes through. This insures that the light entering through an opening cannot escape the same way. This simple process increases the contrast associated with the text, making it easier to read while effectively eliminating all the glare.

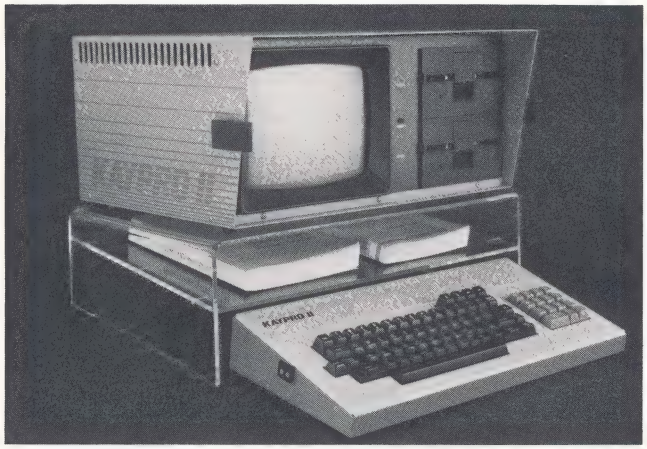
PRICE: $ 39.50

Power Screen

The SDC Power Screen incorporates the features of the SDC Anti-glare Screen while limiting static electric discharge problems common to CRTs.

PRICE: $ 49.50

AVAILABLE FROM:
Screen Data Corporation
240 Cedar Knolls Rd.
Cedar Knolls, NJ 27927
201 285-1212



Computer Stand

This angled Kaypro stand is made of clear acrylic. The stand has a storage shelf and room for the keyboard to slide underneath when not in use.

PRICE: $ 45.00
Dimensions: 19"W x 12"D x 5 1/2"H

Dust cover

The SGW dust cover is made of anti-static vinyl that is machine-stitched.

PRICE: $ 15.00

AVAILABLE FROM:
SGW Enterprises
Suite J
722 Genevieve Street
Solana Beach, CA 92075
619 755-8324

Printer Optimizer

The Printer Optimizer(tm) is a fully-modular printer buffer with memory capacity from 64K to 256K. Plug-in accessory boards allow configuration for different requirements, including memory size, number of outputs, and an appropraiate combination of serial and parallel ports. Extensive features include multi-printer switching, multi-copy, string and character translation, control access from your Kaypro, and a control pad on the unit. The printer optimizer has room in the casing for one serial port board and one parallel port board.

PRICE:
Optimizer (base unit): parallel to parallel $ 499.00

Accessory Boards:
Opti3po: 1 parallel to 2 parallel $ 79.00
Opticom: serial RS232 serial to serial $ 99.00
Opticom+: 1 serial to 2 serial $ 149.00
Optimem 64: 64k memory expansion $ 139.00

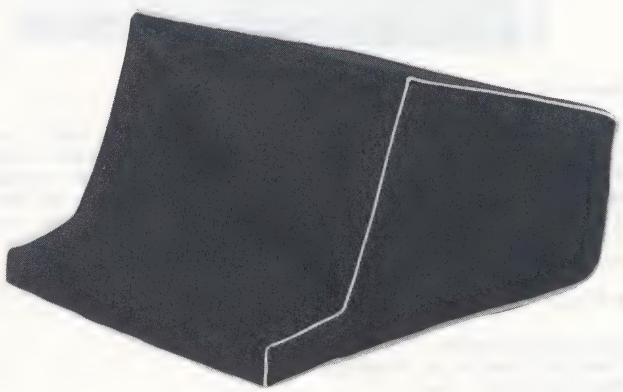
AVAILABLE FROM:
Applied Creative Technology, Inc.
Suite 303
2156 W. Northwest Hwy
Dallas, TX 75220
817 433-5373
800 433-5373

PUPS

PUPS is a solid-state Uninterruptible Power System (UPS) that offers complete protection for your Kaypro. Utilizing rechargeable batteries, PUPS is always on line with no "transfer time" involved. PUPS isolates your Kaypro from power line fluctuations. A 12VDC power cord is included. An auxiliary power pack is available for mobile operation. This unit can be switched between 115 and 230 VAC 50-60 Hz and weighs 19 lbs.

PRICE:
100 Volt/Amps. (approx. 75 watts) $ 415.00

AVAILABLE FROM:
Bits Power Systems, Inc.
Suite B114
11020 Audelia
Dallas, TX 75243
214 340-1208
800 527-1378



Form-fitting Kaypro Cover

The dust cover is made of washable static-free sailcloth. The cover is designed to protect a Kaypro that is set up on a desk. A two-piece cover is also available. Available in navy or royal blue with a silver-gray piping and trim.

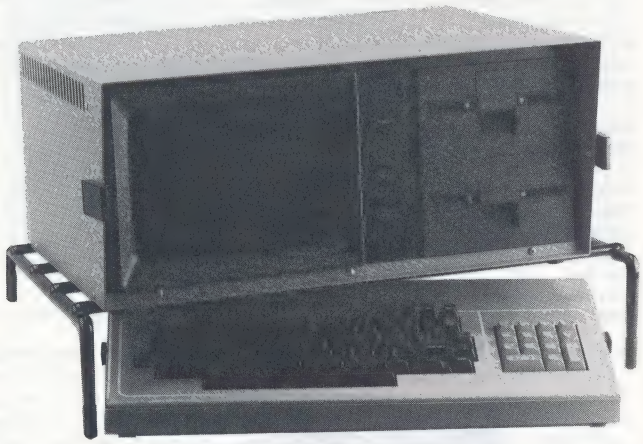
PRICE:
Dust Cover: $ 16.95
Two-piece Cover: $ 19.95

Cordura Travel Case

The Coverman case is made from durable Cordura(tm)

fabric. There is a large interior pocket for manuals and disks as well as external handles and a detachable, padded shoulder strap. The Coverman case is available in gray-green, dark blue, or black.

PRICE: $ 59.95



Smart Stand

The Smart Stand is an unobtrusive stand designed to hold the Kaypro. The angled stand is made from rounded, steel rods covered with a polymer material that protects surfaces from scratches. The Smart Stand does not obstruct air flow and leaves room underneath for the keyboard to allow more desk space when your Kaypro is not in use.

PRICE: $ 34.95

AVAILABLE FROM:
Central Computer Products
860 Central Ave.
Filmore, CA 93015
805 524-4189

Fat Jack Reading Rack

The Fat Jack Reading Rack attaches above the CRT on your Kaypro. The rack is 16" wide. A unique page clip holds books and magazines open.

PRICE: $ 17.95

AVAILABLE FROM:
Twist, Inc.
P.O. Box 1406
Renton, WA 98057

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KAYPRO®
CORPORATION

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TECH NOTES TECH NOTES TECH NOTES TECH NOTES TECH NOTES TECH NOTES TECH

HALF CARD VIDEO BOARD

VERY SHORTLY, ALL PC'S WILL BE SHIPPED WITH THE HALF CARD VIDEO BOARD IN THE COLOR EMULATION MODE. THIS WILL ALLOW YOU TO RUN AUTO START GRAPHIC PROGRAMS LIKE FLIGHT SIMULATOR.

IN THE COLOR EMULATION MODE, THE DEFAULT WILL BE TO COLOR EMULATED GRAPHICS. THIS WILL ALLOW YOU TO RUN GRAPHIC PROGRAMS. UNTIL RECENTLY, ALL PC'S WERE SHIPPED IN THE MONOCHROME MODE WITH THE DEFAULT GOING TO MONOCHROME TEXT (COLOR MONITORS MUST BE SET UP IN THE COLOR MODE, THEY WILL NOT WORK IN THE COLOR EMULATION MODE).

THE ABILITY TO TOGGLE BACK AND FORTH BETWEEN GRAPHIC CAPABILITY AND TEXT IS POSSIBLE UTILIZING V-SWITCH VERSION 1.01 (V-SWITCH VERSION 1.00 WILL NOT PERFORM THIS TASK).

SWITCH SETTINGS FOR MONOCHROME MODE

PROCESSOR BOARD	2 & 3 OFF
HALF-CARD VIDEO	1, 3, 7, & 8 ON

SWITCH SETTINGS FOR COLOR MODE

PROCESSOR BOARD	2 OFF, 3 ON
HALF-CARD VIDEO	2, 3, 5, 7, & 8 ON

SWITCH SETTINGS FOR COLOR EMULATION MODE

PROCESSOR BOARD	2 OFF, 3 ON
HALF-CARD VIDEO	3, 7, & 8 ON

EPSON A-DRIVE PROBLEM

IF YOUR EPSON A-DRIVE ON YOUR PC IS RUNNING CONTINUALLY, YOU NEED TO PUT A 470K OHM TERMINATING RESISTOR IN THE A-DRIVE AT RA-1. LEAVE THE TERMINATING RESISTOR IN B-DRIVE. BOTH DRIVES SHOULD BE JUMPERED IN THE 1 POSITION AND BOTH SHOULD HAVE A TERMINATING RESISTOR.

Street Address: 533 Stevens Ave., Solana Beach, CA 92075 U.S.A.
Mailing Address: Post Office Box N, Del Mar, CA 92014 U.S.A.
Telephone (619) 481-4300 Telex: 361128 (KAYPRO CORP)